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JACG

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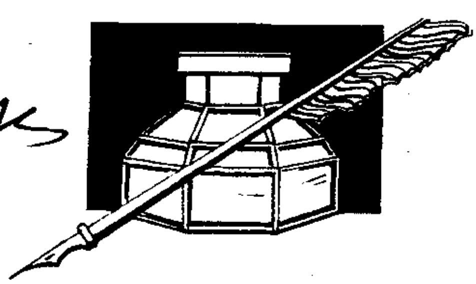
IN THIS ISSUE

EDITIORIAL

Minuteman Printing, in Morristown has their pricing for REAL printing (not duplicating) on a par with the last duplicated (August 1987) issue. Therefore you now hold the first issue in our return to printing. I hope that it is enjoyed. As always your comments are always accepted, and sometimes appreciated!

Again, with the exception of the Desk-Top Publishing page, this issue, like many before it, is notably ST-free in content. This is not by design, but by neglect. I sometimes get the feeling that ST owners feel that they have transcended the involvement plateau and are somewhere else...if I ever find them; I'll try to get them to begrudge us mere mortals a few written words.

Meanwhile, back on Earth, the front page of the Newsletter (which is taken to the printer each month), now looks like it has been taken to the printer each month. We need a replacement. Any voluteers? No attempt will be unwelcome!



MARK YOUR CALENDAR !!
JACG
Meeting Schedule

OCTOBER 10, 1987

ATARI

POWER WITHOUT THE PRICE

OVER-THE-COUNTER EXCHANGE
ON DOA DEFECTS
NINETY-DAY ATARI WARRANTY

ST COMPUTER SYSTEMS

**68000 PROCESSOR — 8MHZ CLOCK — MIDI INTERFACE
SERIAL & PARALLEL PORTS — TOS OPERATING SYSTEM
WITH GEM — 640X400 MONO RES — 512 COLORS
640X200 COLOR RES**

FREE

**WITH SYSTEM PURCHASE-
BASIC LANGUAGE**

520ST 512K RAM CPU WITH

WITH MOUSE CONTROLLER AND TV OUTPUT

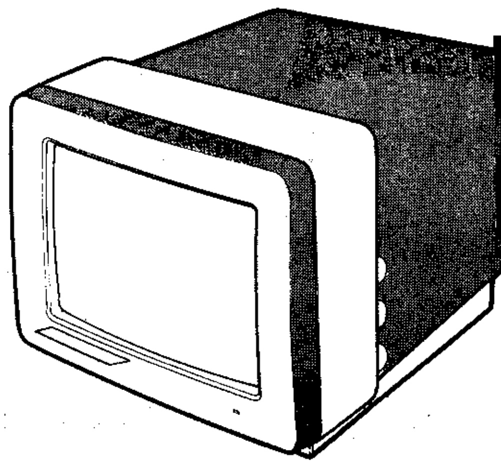
MONO SYSTEM $499.95

COLOR SYSTEM $699.95

SYSTEM CONSISTS OF:
520ST CPU WITH MOUSE,
SF354 SS, DD DISK DRIVE &
SM124 MONO MONITOR OR
SC1224 COLOR MONITOR

1040ST 1.024 MEG RAM

***WITH MOUSE CONTROLLER & BUILT-IN
DS, DD 3.5" DISK DRIVE***

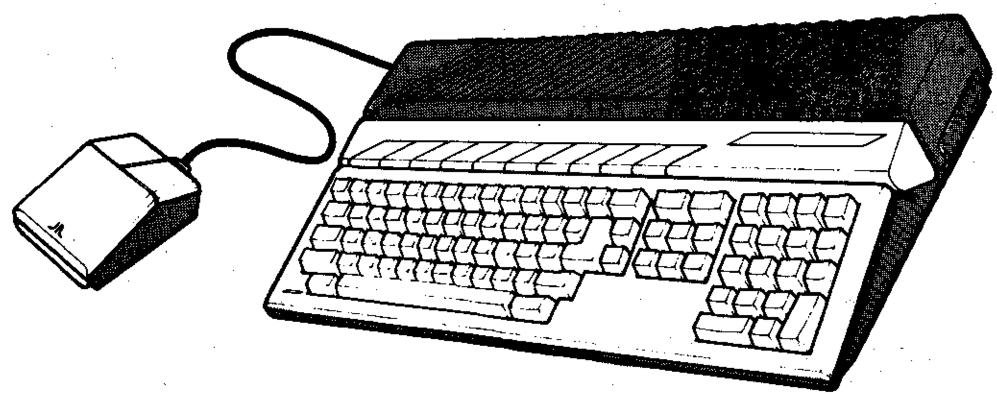


MONO SYSTEM $699.95

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SYSTEM CONSISTS OF:
1040ST CPU WITH BUILT-IN
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SHD204 20 MEG HARD DRIVE	574.95
SF354 SS, DD DISK DRIVE	149.95
SF314 DS, DD DISK DRIVE	209.95
SM124 MONO MONITOR	159.95
SC1224 COLOR MONITOR	319.95
SMM804 DM PRINTER w/cable	189.95
SX212 300/1200 MODEM	89.95



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YOUR ATARI CONNECTION

FROM THE DESKTOP

Linda Peckham
917A Preakness Avenue
Wayne,NJ 07470
790-3061

Welcome to the third edition of "From the Desktop!" Summer may be a slow time for some people, but, alas, the past six weeks or so have been anything but, for yours truly. (Sixty hours a week at work, most of it spent editing a 700+ spec.) So this column will be a little shorter than the first two. And the overtime is out of the way ... just in time for classes .

SOFTWARE AIDES

Font Factory has announced that font disks #4 and #6 are now available ($29.95), as well as the third clip-art disk ($19.95). Disk #4 includes Palatino, Schoolbook and Computer. These first two should be important for anyone wanting more text-oriented fonts (as opposed to dislay-style fonts). Both Palatino and Schoolbook are serif fonts, rather like Times in appearance. Disk #6 is for those lucky people who have access to an Apple Laserwriter, and have no need for the dot-matrix versions of the eleven Laserwriter fonts that are included in the fifteen fonts planned by Font Factory. Finally, the clip-art disk is another collection of high- and medium- res .TNY files. The subjects include travel, medicine, America, Music and Personal. To order directly from Font Factory, add $2.50 per disk for postage, and write to

The Font Factory
P.O. Box 17422
Phoenix, Arizona 85011

For those with the courage and time to tackle making their own fonts, there is now an alternative to the freeware font editor released by SoftLogik. The August issue of ST APPLICATIONS has an advertisement for Font Partner, an editor which will run on either monochrome or color systems. The price is $24.95. The package can be ordered directly (check or money order, add $3.00 shipping) from

Interactive MicroSystems
P.O. Box 1188
Canyon Country, Cal 91351-2600

IMPORTING PICTURES

Last, but not least, is a shareware program that has been available for some time -- PICSWITCH 0.7, by John Brochu. The program was started originally as a way to import Amiga low- and medium- res pictures into the ST. Since then, the program has gone through two verions, and can now read thirteen file formats, and write to four. Besides the ST formats, it can read:

Amiga IFF (Low & Medium Res)
Macintosh MacPaint
Atari 8-bit graphics 7.5,8,9
Compuserve RLE

The only ST format it does not write to is Tiny -- unfortunately, since Tiny is the only compressed file format recognized by Publishing Partner.The program is a GEM PRG, run from the desktop. After the title screen, the file dialog box comes up, to select the file. After selecting the file, the program will attempt to read the file and convert it -- if the extender is recognized. You must use one of the extenders listed in the documentation! If the attempt to convert fails, the program returns to the dialog box. (It may also crash at this point, with two or three bombs -- at least, when trying to convert some Mac files which apparently weren't quite what I thought they were.) Once the file is converted, it is shown on the screen, in whatever resolution you are working in. To save, hit the S key, and another dialog box pops up. This one allows you to save the file in any of the four formats, and in any of the three resolutions. The program can be ended at any time by hitting "Undo" or the right mouse button, and choosing Cancel in the Dialog box.

Converting between ST formats is uncomplicated. The fun starts with the Macintosh or Amiga files. Now many - if not most - MacPaint files come in the full-page -- or 720 lines -- not quite two full ST monochrome screens. If you have Nvision or Paintworks, the full file may be saved to a that program's full-page mode (at 64K chunks a pic!). But that doesn't help Publishing Partner, which doesn't recognize that format (yet). So, you have to chose which 400 lines (on the mono) that you wish to save. Pressing the left mouse button activates a "grabber" (ala Neochrome), to move the picture up and down. The save will take the portion of the picture showing on the screen. If you are using the color monitor at this point, there is a second option. The C key will compress the 720 lines to 240 lines, allowing more of the picture to be saved. The picture can also be compressed vertically in the save option on the monochrome. How well this works depends on the image.Amiga pictures do not have the size problem -- the problem here is of too many colors. Lo-res Amiga files have 5 bits of information/pixel, versus 4 for the ST, and 16 levels each for red/blue/green, as opposed to 8. To make the best of this limitation, PicSwitch allows you to manipulate the information, letting you change the selected pallette and colors to get the best image.

For people wanting to find images to use with Publishing Partner, or for any other graphics-using program, and who have a modem with which to prowl the bulletin boards, this program allows access to images outside the ST world. (Most of the hi-res pics I've contributed to the library were originally on the Mac.) It's not perfect -- I'd like to see it able to write to the Tiny format. It also insists on recognizing just the extenders listed above. Unfortunately, packed files may, on unpacking, end up with different extender names. MacPaint files usually have the .DAT extender, (and also short .INF files, which are not used by PicSwitch). This means the extenders must be corrected before running the converter.You will also need unpacking programs. The Amiga world appears to use the same Archiver format used by ST and IBM, so ARC.TTP works fine. Macintosh images, however, will probably require a program called UNPACK.TTP. A description of a packed file will usually make reference to PACKIT III.

Trying to import images made on other systems is an interesting experience. First off, you can't be sure that interesting sounding file will be convertible, even if it came up on a search for "MacPaint" (Macintosh) or "IFF" (for Amiga). If you want Tiny files for the end product, you'll have to save in uncompressed Degas format, then use TNYSTUFF. And if you are using a ram disk (a definite plus!), make sure the ram disk is one that survives resets!!! And you may have to do some additional editing on the files - for instance, a set of Mac animal pics were sideways. I had to use DEGAS ELITE to move them right side up. But, all in all, it is an invaluable program for picture seekers.

See you in October!

Using the Controller Jacks for more than game playing Part I

Paul Machiaverna - JACG

The 8-bit Atari computers possess a very powerful method of reading and writing information; the controller jacks. Yet, they are very easy to use with a little background information about them. Many people will refer to these jacks as the joystick ports because the joystick is about the most used device that plugs into them. I use the two names interchangeable. I mention that so you will not get confused when I make reference to them. The 400 and 800 computers have four jacks on the front, while the XL and XE computers have two on the right side. With the least amount of technical jargon I'll explain how the jacks are used by the computer and how different devices can be connected. I'll save the deeper technical information for the second part of this article, as well as some projects coming later that you can build if you have some experience with electronics.

First, let's start off by understanding how exactly a joystick feeds information into your computer. Boot up your computer with Atari BASIC or compatible (BASIC XL, BASIC XL, etc.). Type in the simple program below and plug a joystick into jack one.

```
10 PRINT STICK(0)
20 GOTO 10
```

Now run the program and you will see a stream of numbers printing on the screen continuously. If you keep the joystick in the normal, straight position you will read the number 15. If you push forward, you will see 14. Pull backwards, and you see 13. To the right is 7, and to the left is 11. If you push or pull the joystick diagonally you will see more numbers. Try it and see for yourself.

What we are seeing here is that the computer is <u>reading</u> information <u>from</u> the joystick. Therefore, we call a joystick an <u>Input</u> device. In Atari BASIC we use the STICK(n) command for reading the controller jacks. Where the 'n' is used to specify which controller jack we want to read. Keep in mind that eventhough we refer to the first joystick jack as port one, BASIC reads it as port zero. As you can guess, you would make n=1 to read the second joystick.

The use of the joystick has been used for applications other than playing games. It has been used to move the cursor on the screen, to draw graphics, to make selections from menus, and I have even used it to control a model railroad. Keeping the concept in mind that the joystick is an input device, we also realize that it is the position of the joystick that is read by the computer. The way the position is read is by opening and closing a series of switches which are mounted inside the joystick. The position of the joystick is what dictates which switches are open and which are closed. The fire button is also a simple switch which read as being open or closed. Now that we know what the joystick is doing, let's get slightly technical by explaining how the computers reads them.

The information which is read from the joysticks in the form of digital signals. Now before you stop reading this article and go on to the next one, just bear with me a little. Digital is the name given to an area of electronics where the signals used are in binary form. The binary concept can be compared to a light bulb and a switch. When the switch is in one position the light will be on, and when the switch is in the other position the light will be off. It is common to say that when the light is on we have an ON state, and when the light is off we have an OFF state. Also, ON is called a HIGH logic level and OFF is called a LOW logic level. Relate all this back to the joystick and think of the movement of it as changing logic levels of the information being read by the computer.

Each digit of a binary number is called a BIT. Bit is a contraction coming from <u>BI</u>nary-digi<u>T</u>. One bit of information is enough only to monitor the state of one switch. There are only two possible states of a single switch. However, the movement of a joystick has nine possible states. Obviously, there has to be more than one switch inside the joystick. There are four switches. Huh? Why isn't there nine switches? Well, read on. In the binary number system the right most digit place holds a weight of 1, the next digit to the left holds a weight of 2, the next holds a weight of 4, etc. The weight of a digit is it's value within a number. The weight of each successively higher position (to the left) is an increasing power of two. Therefore, a binary number of only one digit can represent only two numbers, one and two. Increase to a two digit binary number and four numbers (0-3) can be represented. When bits are grouped together they are given special names. A four digit binary number is called a <u>nibble</u> and an eight digit one is called a <u>byte</u>. Notice that a byte can represent 256 numbers. Here's why...

128 64 32 16 8 4 2 1 <=- Weights of each digit

7 6 5 4 3 2 1 0 <=- Bits making up a byte

Also notice that the first (rightmost) digit is the zeroth bit, not the first. All counting is done starting with zero and not one.

Still with me? Good! Now I will tell you why such a big discussion about bits, nibbles, and bytes. I told you earlier that four switches are used to monitor the position of the joystick. That means that we have a nibble of information being read for that joystick. A nibble can represent sixteen numbers, 0 to 15. Three bits can represent eight numbers, 0 to 7. But, we have nine different ways of moving the joystick. Obviously, 3 bits are not enough to read it. So, we have to go with a nibble. If you take a look at the controller jacks you will see that there are nine pins. Four are used for our nibble, one is used for the fire (trigger) button, two are for paddles, and the remaining two are +5 volts and ground. Incidentally, +5 volts is used to represent the binary HIGH logic level and ground (0 volts) is used for the LOW logic level for this application.

I'll stop here for now to give you a chance grasp the operation theory of the joystick, as well as your breath. In part two I will get more into the technical information about the controller ports. As stated before, these ports can serve as a very powerful means of reading and writing information to and from the Atari computers. If you have any questions, leave me E-mail on the JACG bulletin board at (201)-298-0161. See you next month!

Letter to All

Steve Godun - JACG

via the JACG BBS
August 10th, 1987 11:58 PM

General question/suggestion to all significant JACG people...

I was reading a back issue of a JACG newsletter that Gary gave me (upon my request) and I saw that the JACG had alloted funds for two HAPPY enhancements for your 1050 disk drives to aid in copying your 8-bit software library. I know that all non-profit organizations try to save money whenever possible, and that is the reason for this letter.

Instead of purchasing the HAPPY enhancements (for about $150 each; $300 total), why didn't you simply buy one US Doubler and a RAMBO XL 256K upgrade kit? There is a PD program out called COPYMATE 4.4 (I gave a copy to Mark Knutsen awhile back) that would be perfect for your needs. Instead of this arrangement:
Atari 800XL (64K) & Atari 1050 w/HAPPY & Atari 1050 w/HAPPY - All you'd need is this:
Atari 800XL (256K) Atari & 1050 w/US Doubler. This set up would save you about $200! CopyMate uses the US Doubler's UltraSpeed, so copying is faster than normal. It also recognizes the 256K upgrade, so you can make a copy of a full double density disk in one pass. It allows multiple copies on a single read operation, so there's no need for two drives. ▶

I know I'm a new JACG'er, but I thought you'd like to know about this idea. You could still sell the HAPPY enhanced 1050's and (with that money) buy a 1050, US Doubler, and RAMBO XL and still have money to bank. Please think about it and let me know if you agree or disagree.

PRESIDENT'S CORNER

Tom Pazel - JACG

Can anybody tell me? Is it me or has the world of Atari been rather quiet lately? Sure, we're all patiently awaiting the Mega STs, the PC and various other things, but even still, things just seem too quiet to me for some reason. The calm before the storm? After? I suppose we'll just have to wait and see.

Just before the August meeting, something happened to the hard disk on our BBS which caused the files in the File Area to become inaccessible. Oooops! (Fortunately, the files themselves were still there). Murphy's Law came into play here, as we had no backup of the hard disk. Thanks to the efforts of our ever-slaving SysOps, however, the File Area looks pretty much back to normal. The hard drive WILL be backed up on a regular basis from now on, right guys?

I normally don't like to use my column to review software, but I will make a brief exception this time. I recently bought a program called AwardWare, from Hi Tech Expressions, Inc. Let me start by saying why I mention this disk at all. My reasons are twofold: 1) It's a high quality piece of useful software and 2) it's at the right price. Basically, AwardWare is similar to The Print Shop in that it allows you to use your printer creatively. As the name suggests, AwardWare lets you design and print certificates, awards, licenses (liquor and driver not allowed), announcements, coupons, tickets, stationery and more. I could go on and on about it, but suffice it to say I give it a very high rating. Very professionally done. It comes on 2 "flippy" disks (with Commodore version) and sells for (are you ready for this?) $12.95 in Gemini. It's truly a bargain. If you're into this kind of thing, please go buy a copy. I think you'll be glad you did.

That's it for this month. Don't forget about our bulletin board, disk library and all the other goodies you can enjoy as a member of JACG. Until next time...

BETA TEST

Walt Drummond - JACG

J.A.C.G. Library Disk #57

Disk #54 from the J.A.C.G. Disk Library is Graphics/Utility disk. There are five graphics programs and seven utility programs.

KOALA2MP
This utility converts a Koala PIC file to a MicroPainter file. It's slow, but it works.

MP2FWA
Converts a MicroPainter to FUN With Art format file.

MP2KOALA
Bet you can't guess! Right, a MicroPainter to Koala format utility.

MICROPUZ
This is a game that breaks up a Koala pic into a jig saw *puzzle, and then wants you to put it back togather. Pick* a picture with lots of detail. This one's tough!

CARDFILE.BAS
From AANLOG mag. A card filing system.

DISKPRNT.BAS
A disk label print program, with several options. Neat. In BASIC, so you can modify to fit your needs.

MATTEDIT.BAS
This one is a mini word processor. Takes some work to figure it out, but not too much.

FILEPRNT.BAS
Text file printer for Bank Street Writer, et al.

ANIMATOR
From ANALOG #23, 10/84. A cassette based animator/creator program. Needs an 800 or a translator disk.

CONTEXT
Letter Perfect file utility. I don't have Letter Perfect, so I couldn't test this one, but the BASIC looked good.

SETUPPTR.BAS
A utility to set up an Epson or MX80 printer prior to using VISACALC.

TRACE.UTL

A LISTED basic trace utility. Enter to add to your program.

BETA TEST

Walt Drummond - JACG

J.A.C.G. Library Disk #34

This month, we're looking at Disk #34. The disk is billed as a Home/Business disk, but I found that there were some games, a few utilities, and a small BBS. Altogether, a good value for the small fee charged to *J.A.C.G. Library users.*

FONT FLIP
This is Jerry Whites Font Flip routine. Not badly done for a first cut at creating variable fonts for the Atari, but then, from Jerry White I would expect no less.

EZTRANS
A graphics demo of the Enterprise's Transporter. *Trekkies will like it.*

JUMPJACK
Demo of character graphics. A short game a la "Donkey Kong" that the computer plays for you.

DEFLECT
A BASIC game that uses "/" and "\" keys to deflect puck into targets. From Compute Mag.

ONEON.ONE
From Compute Mag. May '83. A "Breakout" type game for two players.

VARTABLE.LST
Enter this utility to list variables.of your BASIC program.

MXLIST.BAS
A program to list your BASIC programs in expanded text. Nice for those of us that are getting a little far sighted.

MXLIST.LST and MXLIST.OBJ
Listed and object copies of MXLIST.BAS.

MINIAMIS.DOC
MINIAMIS.BBS
AUTORUN.BBS
STARTUP.BBS
README.1ST
WELC
MENU
FUNC
HELP
All the above are programs and files needed to run a mini BBS based on the popular AMIS board program. The little I tested it, it seemed to work well.

I See

Neil Van Oost Jr. - JACG

Presented here is a brief trip into the guts of your typical 8 bit Atari. First of all there are several ways to get in; typically we start at the wall outlet, here we find the source of our machine's life blood. Hopefully its 110 volts alternating current, plus or minus 10 percent (too much or to little can be a problem).

Following the wire from the wall we come to a black or tan box which converts 110 AC to power our Atari can use. The older 800 & 400 had a couple of different types of power supplies, one was just a step down transformer which converted 110 AC to 9 volts AC and another converted 110 AC to 11 volts DC (direct current), either one worked fine as the power supply board in the 400 or 800 was capable of handling and converting both to the 5 volts DC needed internally. The newer 800XL & 130XE power supply does all the converting from 110 AC to regulated 5 volts DC. Thus eliminating heat build up in the computer case.

Now that we have power to our Atari, all those little IC's (intergrated circuit) can start doing their work. The IC that is at the heart of everything is the CPU (central processing unit), which is a 6502 chip. It can be thought of as the conductor, telling everybody else when to do their thing. It works very closely with the operating system (OS) and (DOS) disk operating system. These are machine language programs which the CPU uses to direct the other IC's or to perform such mundane tasks such as adding 1's and 0's in its internal accumulator.

There are some special IC's which are controlled by the CPU, random access memory (RAM), which remembers strings of 1's and 0's that the CPU directs its way as long as the power is on. When you turn the power off your RAM memory forgets everything, unlike the read only memory (ROM), which always stays the same. ROM memory usually contains the computers' OS. If you have your BASIC cartridge plugged in or enabled in the XL & XE, you have added ROM programs, which the CPU can use. If you are using a disk drive your DOS program is transferred from disk to RAM using instructions in the OS ROM.

There are some specialty IC's, which can be though of as special purpose processing units or mini CPU's that only perform one or a small groupe of tasks. The graphics television interface (GTIA) is one of these. It's main purpose in life is to take digital (1'S & 0's) information from the ANTIC IC and pass it along to your TV or monitor. ANTIC is a powerfull microprocessor in its own right. It's task is to control the screen display, it uses its own program called the display list. ▶

Another specialty IC is called POKEY. It has many functions, such as four independent sound channels, which can be controlled using the SOUND command from BASIC or can read values from paddles or joysticks.

The IC responsible for passing information to and from the controller jacks is the peripheral interface adapter (PIA). All these I SEE's working together, weather in a 400, 800, 800XL, 1200XL or 130XE provide us with many services. Without them typing this would be a chore I would never undertake also how would I be able to get the latest in Public Domain software from my local BBS. And most important I wouldn't have any way to feed all those dots to Mr. Packman.

- - - - - - -

UPRINT

Neil Van Oost Jr. - JACG

UPRINT (Universal Printer Interface) from Digital Devices, is a printer interface and print buffer. It comes with either 16K memory or 64K memory. If you purchase the 16 K version, it is user upgradeable to 64K. Since the UPRINT I received was the 16K version, I rushed right out to my workshop and searched for those 4164 DRAM's that I removed from my 130XE when I upgraded it to 320K. Sure enough after a short search through half a ton of mixed odds n ends there they were.

I removed the back of my UPRINT, checked the manual one more time and popped them in. Just five minutes later my printer was chattering away. Controls on the UPRINT were very simple, a red button to clear its memory and a black button, which will print an extra copy for each time it is pressed.

The UPRINT plugs into your serial port and has a free serial port on it for daisy chaining. Before receiving the UPRINT, I never thought I would have any use for a print buffer, but now that I have dumped some pictures to the printer, I don't know how I ever got by without one. The computer sends your print file to the UPRINT at 9600 baud, then you can do something else with your computer while UPRINT takes care of your printer.

Information on UPRINT and other Digital Devices products is available by writing; Digital Devices Corporation, 430 Tenth St, Suite N205, Atlanta, Georgia 30318, Tel. 404-872-4430

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Atariwriter Plus and the Panasonic KX-P1091
--> CUSTOM PRINTER DRIVER EDITOR <--
By George Sandford JACG

FUNCTION:	Dec Code:	Atari Key Code:
Initialize every line	= ------	
Line feed & C/R	= 155	
Underline OFF	= 27 45 0	Ctrl U or fuji
Underline ON	= 27 45 1	Ctrl U or fuji
Backspace	= 8	
Elongate OFF	= 27 87 0	SEL E
Elongate ON	= 27 87 1	SEL E
Bold OFF	= 27 70	SEL .
Bold ON	= 27 69	SEL .
Superscript ON	= 27 83 0	↑ up arrow
Superscript OFF	= 27 84	↓ *down arrow*
Down 1/2 line & C/R	= ------	
Return W/O Line feed	= 155	
Example of a Print Font setup:		
G1 PICA, 10 cpi, 80 cpl	= 27 80	
G2 ELITE, 12 cpi, 96 cpl	= 27 77	
G3 PROPORTIONAL	= 27 111	
G4 COMPRESSED, 15 cpi	= 27 15	
G5 Italic ON	= 27 52	
G6 Italic OFF	= 27 53	
G7 NLQ PICA	= 27 110	
G8 NLQ PICA EMPHASIZED	= 27 110; 27 69	
G9 NLQ PICA ITALIC	= 27 110; 27 52	

Ex: Start a line or segment with [ctrl G5] "Italic ON" and release the italic with [ctrl G6] "Italic OFF", if you then follow that with a [ctrl G1] the printing font will return to PICA.

Exception: Refer to your printer manual before using the simple [ctrl Gn] commands since not all printer options are released with another simple option change, but require a release code, such is the case with "Italic OFF"

It must also be noted that to custom combine two options such as the exampled G8 and G9. You must string the two commands together in the custom driver set-up, with a ";". The command should look like this: 27 rtn 110; rtn 27 rtn 69 rtn rtn. NOTE: you must recognize that this is but one example of the many combinations that can be saved in a driver file such as [D:PLUS1]. Lets create another file [D:PICA1] and this time use only PICA styles with all the variations that can be applied to PICA. And the let's do another file [D:ELITE1] using ELITE styles, etc.

Now, when you write something in Atariwriter Plus, load all your desired custom printer drivers on your "SAVE" disc. When its time to print your work, the program will ask for your printer driver, load it, set the global commands and print it.

PDG

Doug Van Hook - JACG

In the late 70's when I first began to work with *microcomputer software, an accountant approached my friend* George with an idea. George proceeded to develop a Client Accounting System. Disk 127D is not set up for multiple clients, but it has the same type of double entry General Ledger System. On the flip side of our Disk of the Month is a Spreadsheet program similar to Syncalc which was written in BASIC.

The General Ledger system has different versions for the XL/XE and 800 series computers. For those of you unfamiliar with a General Ledger System I'll provide a brief description. A Ledger contains "T" accounts which are used to monitor the movement of money from one account to another. Every transaction has two entries... one on each side of the "T". An entry may take money from a CASH account for a purchase and post the same amount to an ASSET account. As long as the amounts are recorded on both sides of the "T" the sum of numbers on the left side *of the "T" will balance with the sum of the right.*

You control the titles of the accounts for your business or home. Account numbers however, have a significance to the program. The Profit and Loss report is obtained from the Income and Expense accounts, and the Balance Sheet is obtained from the Asset, Liability, and Capital accounts. Account numbers are grouped as follows:

1 to 19	Income
20 to 59	Expense
60 to 79	Asset
80 to 89	Liability
90 to 99	Capital

The program will print reports to the screen or to the printer. In the documentation the author provides the GEMINI 10X printer codes used by the program along with the line numbers. I have a Prowriter Jr. and found no printer problems except for a "B" which printed before expanded text titles.

If you own a business, and keep your books by hand, or would like to play with "What If" situations on your Atari, this program is for you. If you don't want to buy "Your Personal Net Worth", and would like to set up accounting procedures for your home, the program can be useful too. Finally, if you are an accounting student looking for an easier way to learn about General Ledger Systems you will find this program valuable.

I don't want to neglect "SMARTSHT" , the spreadsheet program on the Flip Side of the disk. This program is ▶

great for the novice spreadsheet user. You can actually sit down and learn the system by just experimenting with the OPTION, SELECT, and START keys. The program is a little slow because it is written in BASIC, but can be coaxed to run faster with TURBO BASIC.

To use a spreadsheet you must enter combinations of Labels, Values, and Formulas. A label is a description of a column, a value is a number, and a formula is a mathematical expression. The spreadsheet will recalculate all the fields when you press the START key. Smartsheet has other features too. You can add a range of columns, establish Dollar formats, Load or Save worksheets, or Print spreadsheets.

Understanding spreadsheets is a MUST for anyone in school or business today! As long as calculations don't have to occur at lightning speed, this program is every bit as useful as SYNCALC.

Just when I thought I was finished with this article, I realized that perhaps the most interesting program on the disk was not included.

The Checkbook Budget program was designed to maintain records for a NON-PROFIT organization. I will quote the introduction from the documentation which is included:

Non-profit organizations like churches have tax exempt status. Accounting is mainly a matter of keeping an accurate checkbook. Budgets are set up however so it is necessary to break payments into amounts designated for certain purposes. Income is usually also broken down in categories. This program was written to aid in keeping track of income and expenses in such situations, and provide printouts of information when necessary. If you desire this much information for your household finances, you could easily set up the program for your personal use.

This program was written by S. Ockers in January of 1986. It is a facinating program because of the techniques used. The program uses the Atari's ability to automate keyboard input. You can actually see the program stop, enter data from a file, and CONTinue processing.

The program stores categories as data lines in the program. Check numbers are stored in lines 0001 through 9999. This information is then used by other programs (not included) by reading this program as a file.

Some of the printed reports did not work correctly on my printer, but the screen displays were well organized and accurate. This program would be an asset to anyone who owns a business or maintains business records. It is also a full-featured menu driven program which would be ideal as a basis for your own projects. ▶

As if that wasn't enough, the disk also includes a public domain word processing program complete with command summary documentation.

This disk was brought to our library courtesy of the Portland Atari Club exchange... Thanks guys for another high quality gem that is truely a bargain at twice the price!

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NOISE from NOYES

D. B. Noyes - JACG

Assorted bits and a few bytes

As I recently browsed about my favorite ATARI retail emporium (GEMINI ENTERPRISES - Cedar Knolls), I came to the conclusion that there is an awe-full lot of software currenty available for both 8 and 16 bit machines. Not only old and somewhat recent, but just released also. It would appear that GEMINI is currently balanced about 50-50 (8 to 16 bit). I can't vouch for the 16 bit titles...but they are certainly numerous, and many appera interesting and useful. Perhaps some erstwhile ST'er can write of them.

But, as to the 8-bit, there are oldies, re-released oldies, "bundled" (that is more than one title on a disk), and new releases. If I can remember correctly, prices start around $5.00, and MANY titles are under $10.00!!! If you think that the 8-bit has been written off, take a look at what is currently available. It's almost cheaper now to buy commercial software for the 8-bit ATARI than it is to get a magazine and (UGH!) type-in a program. Which brings me to a byte...er, I mean, a bite.

ANALOG (which I prize highly as an ATARI magazine, has been touting their "8-bit Extra" lately. A compilation of submitted, but not published software for ANALOG. Well, remembering the greatness of the "ANALOG Compendium", I quickly ordered both book and disks (2 double-sided). Damages, $34.90. My first order didn't take, I then called ANALOG in Massachusetts and within a few days the package arrived. That's the good news. The disks were bent (but I was able to sector copy them onto good media, and the "book" was a "magazine". Visibly, a let-down from the "Compendium". Well, perhaps the content will make up for it? Dream on Noyes...Now I see why most were never in the magazine (notice that I didn't say "all"). Perhaps if one wants to invest $8.95 in the "book"...but $34.90...why do I get the feeling that my clothes are so clean? ▶

Bought (among others) COLOSSUS CHESS from ANTIC. Appears to be quite a versatile and powerful chess program...and I am sure it will get much use. My question is...why for $15.95 does one have to settle for default ATARI blue? If I only knew M/L! Also picked up SEVENS and KLONDIKE SOLITAIRE from ANTIC...boy, can solitaire be addictive!

Elsewhere in this issue is a letter from Steve Godun re. US Doublers (an ICD product) and Copymate 4.4 (or 4.3, for that matter) in conjuction with the ATARI 1050 disk drives. I can attest to the speed in copying disks (appears to be as fast as "HAPPY"), and with the entire disk in memory...additional copies require no reading, just the write operation...VERY fast!

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MASTERTRONICS
or
The Worst Games
for
The Cheapest Price

Paul J. Kowalski - JACG

Mastertronics, a British-based software company, has been in business for a few years. How they lasted this long, I can't imagine. They originally produced software for Commodore machines, and have since begun to double-pack some of their titles with both ATARI and Commodore versions.

The first thing that you would notice, if you had access to both computers (ATARI and Commodore), is that the ATARI translations are poor in quality and design. The second thing that you would notice, is that most of their games are awful to play. The only positive aspect of their games is that the graphics aren't that bad. In fact, the graphics are the onlt thing of merit. The sound quality is terrible, and some games, e.g. KICKSTART, have music on the Commodore version, but no music on the ATARI translation.

Of the Mastertronic games that I have seen and/or played, I offer you the following list of "bad" games:

1)KICKSTART is a split-screen motorcycle race over various terrains and obstacles. The graphics are well defined but the game, in general, is a waste of time. On the Commodore version it writes high scores to disk; the ATARI version doesn't.

2)ELEKTRAGLIDE is another motorcycle type racing game, but instead of seeing the vehicle, you have a forward view of the road. The object is to avoid obstacles and go from one time-warp tunnel to another. Again, the graphics are nice, but the game is impossible to win, and is monotonous and just plain boring.

3)ACTIONBIKER is another motorcycle entry. You have to find 40 items as you travel along a multiple scrolling screen. The graphics are not bad to look at, and the game-play is easy. The biggest problem is the monotony. Who wants to spend hours of play-time in finding 40 items? You just keep on going around and around in circles (even though a "cheat-sheet" is enclosed giving you a map of where the items are). The items have to be found in order. This game is just plain boring.

NINJA is the only game that I have found that is beautifully done. The graphics are excellant, the musical score is very well done, and the game-play is smooth and well defined. The object is to find six idols, while fighting evil "ninjas", "thugs", and "karatekas". You use Chinese Stars and small throwing daggers as weapons - along with your ninja sword and karate fighting moves. Though a very hard game to win, it is not monotonous, and is truly fun to play. If onlt Mastertronics would make all their games for the ATARI with this high quality!

To sum up, Mastertronic games are cheap. The highest price that I've found has been $10.00, and the lowest was $5.00. The price is guaranteed to sell a lot of copies, but if only one out of four games is any good...people will refuse to purchase their wares.

If anyone has an opposing point of view regarding Mastertronics, I would like to hear it. I've only reviewed four of their games, and I know that there are many others out there.

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ATARI Finance

Donald Forbes - JACG

A bird in the hand in worth two in the bush.

A dollar in the hand is worth two dollars ... at some future date.

And that is what the mathematics of finance is all about. You heard David Dvorin's talk about FINAID, his program to help you make financial decisions.

You can calculate (1) the future value of an investment or regular deposits, (2) amount of regular deposits, regular withdrawals, and initial investment, or a minimum investment, or (3) a nominal interest rate, or an effective interest rate.

As he pointed out, all the calculations hinge on the time value of money. If you borrow money for a car or a house, how much will you end up paying back. Would you rather have a million dollars in cash, or 100,000 a year for ten years? How much would you pay for a lifetime subscription to the Reader's Digest?

What sounds so complicated is really very simple. In essence, the problem is this: you have FIVE factors and if you know FOUR of them you can solve for the FIFTH.

These are the five factors:
(1) The PRESENT VALUE of the initial cash flow, or a series of future cash flows.
(2) The FUTURE VALUE of the final cash flow (either a balloon payment or remaining balance), or the compounded value of a series of prior cash flows.
(3) The periodic PAYMENT amount.
(4) The INTEREST rate.
(5) The NUMBER of compounding periods.

A picture is worth many words. Here is a simple picture:

```
   Money received

     A   A   A   A
     :   :   :   :
--------------------
: 1   2   3   4
V
Money paid out
```

This diagram is called a cash flow diagram. The arrows represent exchanges of money. A downward arrow is money paid out, an upward arrow is money received. The horizontal time line is divided into equal increments, one for each compounding period (week, month, or year).

For these calculations you only need one basic equation: the money you pay out TODAY (PV)has to match the money you receive from the PERIODIC payments (PMT)and the FINAL payment (FV). You also need the number of payments (n) and the interest rate (i).

Here is the equation:

```
PV +

PMT A
------ (1 - (1 + i/100)*) +
i/100

FV(1 + i/100)* = 0
```

where i is the interest rate, A is 1 for end-of-period payments or 1 + i/100 for beginning-of-period payments. I have used the asterisk (*) to stand for the exponent -n (or, to the power of minus n).

With this one (or should I say, simple?) equation, you can do most of the calculations required in the mathematics of finance.

Once you have the formula, you have several choices: (1) Enter any four of the variables and calculate the fifth, or set either (2) FV or (3) PV or (4) PMT to zero and enter any three variables and calculate the fifth.

You also have the option to search for payments at the BEGINNING of the period, or at the END of the period.

Option 1 with BEGINNING of period covers a lease with residual value, or an annuity due. With END of period it covers a direct reduction loan with balloon payment, or a discounted note.

Option 2 (FV zero) with BEGINNING of period covers a lease, or annuity due. With END of period it covers a direct reduction loan, a discounted note, or a mortgage.

Option 3 (PV zero) with BEGINNING of period covers periodic savings, or insurance. With END of period it covers a sinking fund.

Option 4 (PMT zero) covers cases of compound growth and savings.

Example One: After 9 years, how much is $155 worth in a savings account paying 5 3/4 % compounded monthly?

Here is the diagram:

```
                        FV?
    i = 5.75 / 12        A
                         :


-----+----+... +----+-----
: 1    2        107  108
v
PV -155
```

The answer: $259.74

Example Two: What are your monthly payments for a 30-year $30,000 home mortgage at 13%?

Here is the diagram:

```
PV 30,000
A
:         i = 13/12
-----+----+....+----+-----
  1  : 2  :    :359 :360 :
     V    V    V    V    V
        PMT ?
```

The answer: minus $331.86

Example Three: What is the balloon payment (added to the last payment) to repay a $3,600 30-month loan at 10% repaid at $100 monthly?

Here is the diagram:

```
                      FV ?
        100 PMT          A
                         !
        A   A   A   A    A
        !   !   !   !    !
   -----+---+....---+----+
   ! 1  2       35   36
   !
   V      i = 10 / 12
   PV -3600
```

The answer: $675.27 (+ $100 for the last payment).

Example Four: What are the monthly payments needed for a 13% yield if you rent out a $63,000 computer for five years and then sell it for $10,000?

Here is the diagram:

```
                   FV 10,000
                         A
        PMT ?            !
   A    A   A   A   A    A
   !    !   !   !   !    !
   -----+---+....+---+-----
   ! 1  2        59  60
   !       i = 13/12
   V

   PV  -63,000
```

The answer: $1,300.16

What you have seen so far covers most of the cases you will ever encounter in the mathematics of finance. All these cases, however, have assumed that the periodic payments are all the same. What happens if they are not?

This brings up the more complex topic of Discounted Cash Flow Analysis. You will not be able to depend on one single equation for an answer, but will have to resort to matrix algebra. Here is a typical example:

What is the rate of return on an investment of $620,000 which returns $100,000 for ten years and $5,000 for five years?

Here is the diagram:

```
     100,000       5,000
      A    A    A    A    A
      !    !    !    !    !
   -----+....+----+----+-----
   ! 1        10   11 .. 15
   V
   -620,000
```

The answer: 8.04%

You can do all the above arithmetic on a handheld calculator ... if you happen to have the Hewlett-Packard HP-15C. You will find all the instructions on page 26 of the Advanced Functions Handbook.

Many of these problems can be solved, in BASIC, on your ATARI if you just have the right formula. Here are some that you may want to try (but you will have to provide your own input and output routines).

Here are the definitions:

T = future value after Y years

P = initial investment

i = nominal interest rate

N = no. of compounding periods
Y = number of years

R = amount of regular deposits

```
REM FUTURE VALUE OF AN INVESTMENT
T=P*(1+I)^(N^Y)

REM FUTURE VALUE OF DEPOSITS

T=R*((1+I)^(N*Y)-1)/I

REM DEPOSITS TO ACHIEVE FUTURE SUM
R=T*I/((I+1)^(N*Y)-1)

REM REGULAR WITHDRAWALS
REM FROM AN INVESTMENT
R=P*(I/((1+I)^(N*Y)-1)+I)

REM INITIAL INVESMENT TO
REM PROVIDE FUTURE VALUE
P=T/(1\I)*(N*Y)

REM MINIMUM INVESTMENT FOR
REM REGULAR WITHDRAWALS
P=R*N/I*(1-1/((1+I/N)^(N*Y)))
```

```
REM INTEREST RATE TO EXPAND
REM PRESENT TO FUTURE CAPITAL
I=N*((T/P)^(1/(N*Y))-1)^100
```

You can find all these formulas, and many more, in the 1981 Osborne/ McGraw-Hill 200-page paperback by Lon Poole, Borchers and Cook entitled Some Common BASIC Programs Atari Edition.

If you feel that this article tells you more about the mathematics of finance than you ever wanted to know, I can only say that I agree with you. If you don't have a charge account, or will never have to borrow money for a car or a new home, or will never have to worry about investing your pension money or an inheritance, then by all means forget everything I said here. On the other hand ...

TEMPLE OF APSHAI TRILOGY

Epyx, Inc.
600 Gavelston Drive
Redwood City, CA 94063
(415)366-0606
LIST PRICE: $34.95

Steve Godun - JACG

This month, I'll review a 3-in-one package that sells for what the original sold for a short time ago. The Temple of Apshai Trilogy contains all of the dungeons from Temple of Apshai, Upper Reaches of Apshai, and Curse of Ra (the latter two were data disks sold seperately, but required Temple of Apshai to be used), and offers faster gameplay, enhanced graphics, and new monsters to contend with.

The Temple of Apshai series is the basic adventure game. You travel from dungeon to dungeon slaying various monsters ranging from cave rats to skeleton bats with your sword and/or bow and arrows. Along the way, you pick up treasures, better weapons, stronger armor, and healing salves. After you've explored enough, return to the Inn (your "home base") to cash in your goods and maybe buy a few more goodies to keep you alive.

In Trilogy, you initially have a choice of the computer generating a character with random attributes, you creating a character and defining everything from strength points to silver pieces, or loading a pre-created character from disk. Trilogy doesn't allow saving your characters on the same side as the game is on, but you can simply notch side 2 of the disk and use that as a handy way to save your character.

After creating a character, you then go to the Inn to buy your equipment. After suiting up, give your character a name and it's off to the dungeons! Like I said, Trilogy contains all of the dungeons in the original Temple of Apshai, Upper Reaches of Apshai, and Curse of Ra for a total of 12 dungeons. You are prompted to enter a dungeon series (one of the three) and then the dungeon number. My favorite is dungeon 3 in Temple of Apshai. Mapping isn't necessary if you have a good memory as most of the dungeons aren't that large, but you might want to make them until you get the feel of the game.

Each dungeon has a different motif. Most are the standard moldy walled, grimy floored, monster infested type, but others hold other evils. One dungeon is set up as a farm, where more common "monsters" attack such as a dog or a horse. Another is based as a monestary, where harmless (?) monks wander in and out of rooms.

Trilogy is a major improvement over the original. Control of your on-screen adventurer is accomplished via joystick and/or keyboard, as opposed to keyboard-only in the original, although some functions (such as using a healing potion) must be entered through the keyboard. Veterans of the original Temple of Apshai won't have to worry about learning a whole new set of commands since the Trilogy uses the same keyboard functions as the original. But the most common actions - forward movement, turning, attacking, and firing an arrow - can all be accessed by the joystick. My only gripe here is that you can only move a certain "amount" with the joystick. Fans of the original Temple remember pressing the 0-9 keys for movement. Here, using the joystick will only allow the "5" movement, so if you want to sprint out a door to avoid a fight, it's back to the keyboard.

Speed and graphics are excellent in the Trilogy. Trilogy is written in machine language, not BASIC like the original was. Full color graphics, 3-D walls (compared to the lines representing walls in the original), and full character animation are all excellent. The animation here really makes for an enjoyable game. Much attention was paid to just about every detail, as shown by the bending bow when an arrow is drawn.

New monsters with odd shapes and old monsters with new appearances will meet you and greet you here. Some, like the guinea pig, are harmless and will just follow you around until they get bored. Others, like the vampire monk, move at incredible speed towards you and will wipe you out if you give them the chance. All of the monsters, from the simple antman to swarms of bugs to the giant tick, are in full color with facinating detail.

► 17

LIGHT PEN ANYONE?

A Build It Yourself Light Pen

By Thomas Lawless, R-ATARI CLUB

For the 8-Bit Atari Hardware Enthusiast!

DISCLAIMER

The device described herein operates well if constructed as directed. Since I cannot control your abilities' or materials' selection process I assume no liability for the information contained in this article. Nonetheless, it works...

INTRODUCTION

Have you ever wanted a light pen, or were maybe just a little curious as to how one worked? Well, read on, as we cover some of the mysteries of this device and explore a few ways to use it.

The first element we will discuss is the light detecting device. Normally a 'photo transistor' is used. Light turns them on, just like a switch. In this case, it's actually the electron beam that 'writes' the picture to the screen (of the monitor/TV) that turns on our photo transistor. A 74LS132 integrated circuit (I.C.) is used for buffering the output so that we get 'clean' triggers (switching).

Next, how do we know where the electron beam is? Well Atari had some forsight (did I say that?) in this department. They tied the trigger input to the GTIA and it stores the approximate location of the electron beam on the screen when the trigger input was activated. Ah! you say, that's all well and good, but how do I use this information? That's where it gets a little tricky. (You knew there had to be catch didn't you!)

Fortunately it's not really that hard for the basic 'stuff'. However, when you get up to writing pull down menu's, with icons ect., it could become a little difficult. You just 'PEEK' at locations 564 and 565. These are, respectively, the Light Pen *Horzontal*, and Light Pen *Vertical*, Shadow Registers. The 'real' registers are located at 54284 ($D40C) and 54285 ($D40D). Both sets of addresses contain the same values. However, I recommend using the lower RAM based values in your programs; no telling when Atari may change the others. These locations are updated 60 times per second. So they are pretty accurate.

Next we use good 'ole Joystick Port One to tell the computer to do something when we press our 'key'. We're going to use the 'forward' line to signal the computer and STICK0 location 632 ($278). You, of course, can use what you please in your own applications.

These light pen position memory locations do not hold actual screen positions. The values have to be interpreted to get the correct screen coodinates. For Horizontal, the left edge is 67. This value increases in increments of one, (one per color clock), until it reaches 227, then resets to zero, and again increments by one until you reach the right edge; which should be 7. For the Vertical, the upper edge is 16, it increments by one, (one per two scan lines), for a maximum of 111 at the bottom.

Well that covers the software part and a little theory. Now to build one of these jewels. ▶

CONSTRUCTION

First look over the parts list. Most everything is available at Radio Shack, or really most any hobby electronics shop, except the large marker pen body. That you'll have to scrounge up somewhere or destroy a good marker to get one.

Next is the cable for the light pen. I used a very flexible intercom cable that had 4 wires in it, and a 'D' type female 9 pin connector. I bent the side tabs back to make it fit into my 1200XL joystick port *(Ed., This shouldn't be necessary on other computer models)*. Then I just soldered the four wires in place as shown in the schematic.

I placed my 'key' switch (S1) about a foot from the joystick port, you can put your's where you want it. You could even put it inside the marker body if you can find one small enough and that you can press 'on' comfortably.

I cut the cable at the 12 inch mark and found the Ground and Forward line wires (#8 and #1 respectively). I soldered in switch S1, and reconnected all wires except the one for the Forward (it's done it's job).

Now we're up at the end of our rope, oops, I meant wire. Cut the following leads on the I.C. (just where the 'fat' part of the lead starts): 4, 5, 6, 8, 9, 10, 11, 12, and 13.

Cut a hole in the end cap of the marker tube, just big enough to fit through the cable you are using. Put the cable through the end cap.

Next we start soldering to the I.C.. Solder the +5vdc wire to pin 14. Solder the Trigger wire to pin 3. Solder a small jumper, (the 1 inch piece of wire), to pins 1 and 2.

Solder one end of the 2000 (2K) ohm resistor to pin 7 along with the Ground wire. Now connect the other end of the resistor to pin 1 or 2.

Here is where those two 6 inch pieces of #30 wire come in (i.e., 30 guage, wirewrap wire). Connect a wire from pin 1 or 2 of I.C. to the photo transistor, lead 1. Connect a wire from pin 14 of the I.C. to pin 3 of photo transistor. (I would put shrink tubing over these connections to prevent them from shorting). Cut lead 2 off of the photo transistor, if it has one (they vary from company to company).

Well that's all the tough stuff. Now you put the photo transistor into the marker tube, use a dull pencil and push it all the way down the tube until it comes up flush on the narrow end of the tube.

Next insert the I.C. into the tube. Tie a knot in the cable or a plastic 'tie-tie' on the 'inside' end of the cap - this is to relieve cable stress.

Go ahead and put the cover on and you're done!

TESTING and FINIS

The BASIC program listing, below, just checks to see if everything works okay. It is well commented. There are at least a few hundred applications you could write yourself. I may write one in the future myself and send it in to PSAN. Well, that's it for me, enjoy yourselves!!!

Reprinted from the
Puget Sound Atari News
July 1987 ▶

```
0 REM LIGHT PEN TEST PROGRAM
5 REM By Thom Lawless, 'R' Atari Club
10 REM 100; GRAPHICS WITH A TEXT WINDOW
20 REM 110 LPEN VERTICAL POSITION
30 REM 120 LPEN HORIZONTAL
40 REM 130 ADJUSTED VERTICAL POS.
50 REM 140 - 160 ADJUST HORIZONTAL
60 REM 170 CHECK FOR 'KEY' ON
70 REM IF 'KEY ON THEN PRINT SCREEN
80 REM AND PEEK VALUES TO SCREEN
90 REM 180 START IT OVER AGAIN
100 GRAPHICS 7:SETCOLOR 4,8,8
110 Y=PEEK(565)
120 X=PEEK(564)
130 Y1=Y:Y1=Y1-16:IF Y1<0 THEN Y1=0
140 X1=X:IF X1<33 THEN X1=X1+227
150 X1=X1-67:IF X1<0 THEN X1=0
160 IF X1>159 THEN X1=159
170 IF PEEK(632)=14 THEN ? X,X1,Y,Y1
180 GOTO 110
```

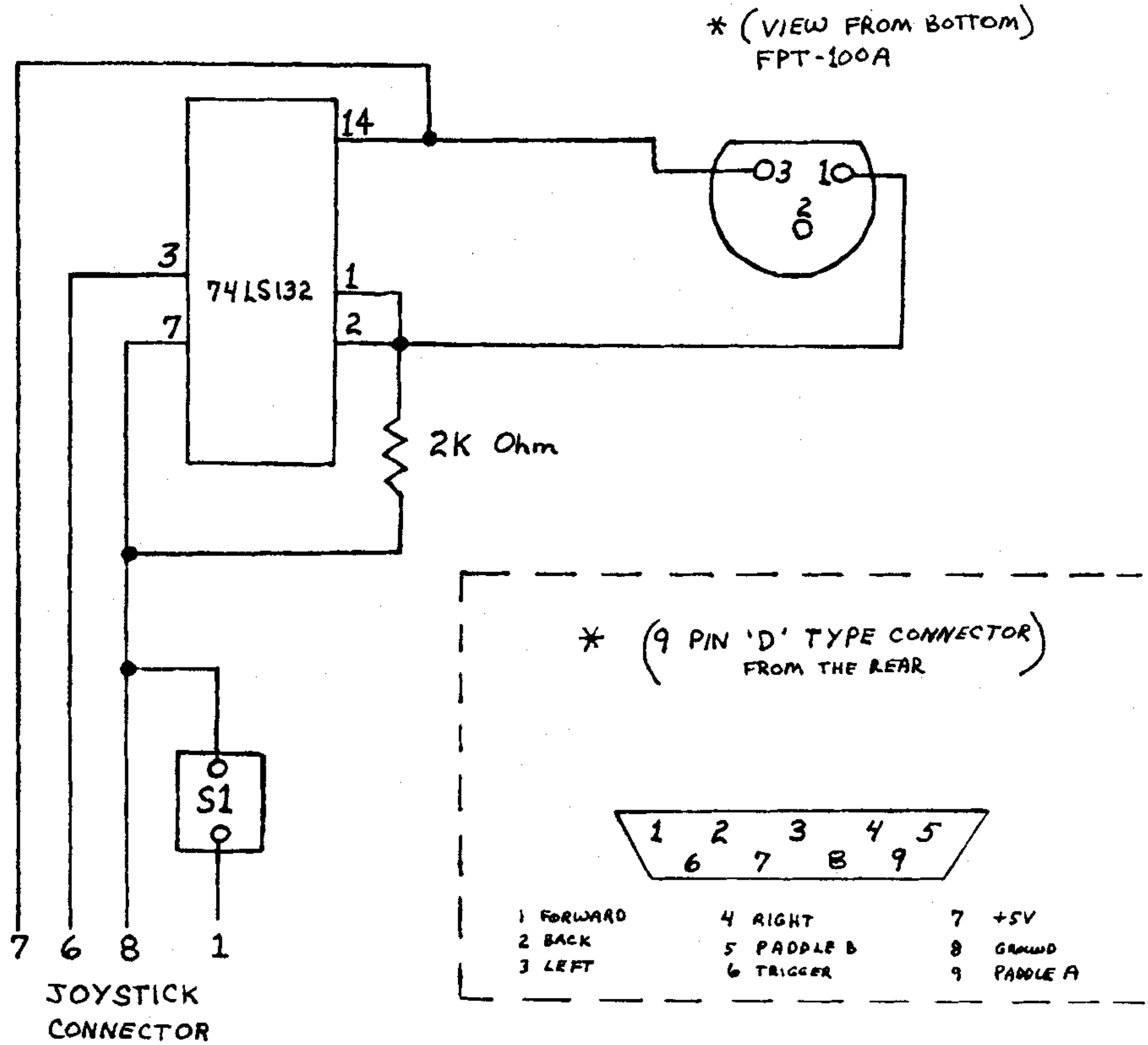
****

PARTS LIST

(1 ea.) Photo transistor FPT100A
(1 ea.) 2K ohm, 1/8 or 1/4 watt resistor *
(1 ea.) 74LS132 intergrated circut
(1 ea.) Single Pole, Single Throw, (SPST), pushbutton switch
(1 ea.) 9 pin 'D' type, female connector
(4 ft. or more) of 4 conductor wire flexible cable.
(13 inches) of #30 wire. (30 gauge, wirewrap wire). Cut into 3 pieces: two of 6 inches and one of 1 inch lengths.
(1 ea.) Large Marker Body. Approximate dimensions (length X diameter): 6 X 1/2 inch. *** Make sure it has a removable end cap! ***
(4 inches) of 'Shrink' tubing (optional).

* NOTE you might have to change the value of the 2K ohm to suit your monitor; it should however, never be less than 1K ohm.

****



SUPER BOULDER DASH

Reviewed by Thomas N. Tjarnberg, BRACE

Reprinted from Puget Sound Atari News - May 1987

Super Boulder Dash: all you need to know.

1. Side one as the old *Boulder Dash* from *First Star Software*. Was good game then, still good game now.

2. Side two is 16 new screens even more creative and diabolical than side one. High quality of game maintained.

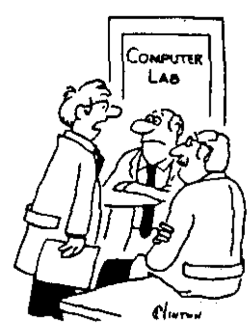
3. Program comes from *Electronic Arts*, doesn't cost much, is loads of fun, exciting, great sound, graphics, entertainment value and all that.

4. If you don't buy this game for your 8-BIT ATARI system you really shouldn't be buying games for your computer anyway. It really is much more fun than a spreadsheet or word processor.

5. If you only have an ATARI ST you can't play this game; and that is really too bad (even though I hear that there are some neat programs for the ST anyway!). This game might be a good reason to get an 8-BIT system as a spare, though!

6. Game should be bought and treasured by all 8-BIT ATARI owners.

--- - ---



Our team has been selected to find an inexpensive substitute for accuracy."

If you want to read the latest Atari news and reviews, download YOUR copy of Zmag from the Syndicate BBS in Middlesex, New Jersey (phone (201)968-8148), or the JACG BBS in Roselle, New Jersey (phone (201)298-0161). Also available now are the current issues of the monthly Zmag ST Report!

XM301 MODEM WARNING
An Electronic Time Bomb?

[Reprinted from the newsletter of the Atari Federation.]

If you own an Atari XM301 modem, you may own an electronic 'time bomb.' After a rash of hardware failures last month, which included smoking a disk drive and two printer interfaces, I found the cause of my problem to be my XM301. The modem worked fine, but was killing off my system piece by piece.

The reason has to do with the 13 wires coming from the serial I/O plug, although only nine wires are actually used by the modem. The other four wires have about 1/8 inch of bare wire showing, and are just hanging around, unterminated, waiting to touch something they shouldn't. I have checked other XM301 modems and this condition existed in them, too.

Here is what to do IMMEDIATELY!

With the power OFF, remove the two screws from the back of the modem and lift off the plastic case. Inspect the wires where they enter the case. You will find four of the wires are not connected to anything. They will be cut off close to the outer sheathing of the cable. If these four wires show any bare metal, cut it off. Be careful not to let the cut off pieces fall into the modem board.

Next, tape each wire individually, so that it cannot possibly touch any other wires or part of the modem. Put the modem back in its case, replace the screws and you're done.

I've written to Atari regarding this problem, but haven't received a reply as yet.

Continued from page 13

Well-planned, creative documentation is included in the package. Although you can play the game with minimal reading, I recommend that you do so. The booklet really sets the mood for the adventure, and explains why you're risking your life in the first place. The only strange part about the documentation is that a friend of mine who also bought the Trilogy had received a small reference card along with the booklet, while I did not. I didn't make a big fuss about it since I already knew the keyboard commands from playing the original, but I can't help wondering why my reference card was omitted.

All in all, Trilogy is a 100% improvement over the original. Even if you have the original Temple of Apshai and the two data disks, I heartily suggest buying the Trilogy. The game has improved so much that it's practically an entirely new game. The $35 list price has been discounted by many retailers and mail order houses, and I've seen it as low as $20. Still, Temple of Apshai IS a fairly old game no matter how you look at it. But for an old game turned new, I'll bet that this one will be around for a few more years to come.

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FLEA MARKET RULES

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In order to clarify the intention of the Executive Committee in sanctioning the use of the BTL lobby before and after monthly meetings for use as a member flea market we publish the following rules:

1. All flea market sellers must be current JACG members.

2. Space is provided on a first-come, first-served basis.

3. Only ORIGINAL programs with ORIGINAL documentation may be sold in the area of software.

4. Hardware of any type may be sold normally without constraint. The Executive Committee reserves the right, however, to limit the physical size and space consumed by such hardware.

5. Flea market business will be conducted only in the lobby and ONLY when the meeting is not in session in the auditorium.

6. The Executive Committee reserves the right to deny or suspend the privilege of flea market usage to any person, member or not, for infraction of these operating rules.

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LET THE JACG

(Do The Work For You)

G. Gorski - JACG

Sit back, relax, and earn extra money, by letting the JACG sell your ORIGINAL software. For one reason or another, we all buy software that just isn't right, has been outgrown, or is no longer needed.

The JACG will sell that software (maximum of 3 per month) at its' monthly meetings. All you have to do is to bring in the software and ORIGINAL documentation, clearly marked with: your name, member number, and the price you would like to sell it for!! For 20% of the sale price, the JACG will handle the sale for you, with no hassles. Please be sure to bring your software to the meeting early, so that it can be displayed at the flea market. This can be a wonderful way to get that much needed extra ca$h. If you need additional information please call, or drop me a line:

Gary Gorski
313 Sheridan Ave.
Roselle,NJ 07203
201-241-4554

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Rules For Merchant Sales at JACG Meetings

Commercial Sellers Must Advertise

The JACG Executive Committee has adopted the following policy concerning commercial sales at any JACG official meeting. The effective date of implementation will be with the July 14th, 1984 meeting.

1. Any merchant selling or renting products, selling services, or in any way promoting same at JACG club meetings must have an advertisement in the current or previous month's issue of the JACG Newsletter, 1/4 page minimum.

2. The number of merchants shall be restricted to three per meeting unless special permission is granted by the President. Preference will be given to current advertisers.

3. Each merchant will occupy no more than one table space or its equivalent. The JACG does not guarantee availability of tables.

4. Merchants are responsible for the return of all furniture they use to its original location and to leave their area neat and clean before leaving.

5. Merchants will check with the Advertising Manager for permission to set up prior to the meeting to have their qualification confirmed.

6. Merchants may not sell during the official meeting and must cease sales and clean up within 15 minutes after the end of the official meeting.

7. Any merchant violating these rules will be not allowed to operate at JACG functions until compliance is assured through the JACG Executive Committee.

8. A merchant is any person, or group of persons, who operate as a regular full or part-time business for the purpose of profit.

The purpose of these operating rules is to insure non-violation of the Bell Laboratories use agreement which, if violated, could jeopardize JACG's use of the facilities. We appreciate your full cooperation in this matter. These rules do not apply to regular members selling their own second hand hardware or original software as outlined in the Flea Market Rules.

Remember, receiving the JACG Newsletter is just one of the many benefits of being a member of JACG.

MAIL TO:

Robert P. Mulhearn
8 Crescent Road
Pinebrook,NJ 07058

DUES:
US (inc. APO, FPO, etc.), Mexico and Canada - $25.00
First class mailing of newsletter add $6.00

Foreign memberships - $30.00 (U.S. CURRENCY)

JACG
MEMBERSHIP APPLICATION/RENEWAL

RENEWAL ______ NEW MEMBER ______ FORMER MEMBER ______

Name ____________________________________ Member #____

Address ____

City/State/Country ______________________ ZIP: ________

Home Phone Number __________________________________

Date ______________________ 1st CLASS MAIL ______ 3rd CLASS MAIL ______

Membership Renewal

Take a moment and look at your mailing label on a recent issu of the JACG newsletter. Check the bottom right hand corn following "Last Issue:". This is the month/year when yo membership expires. Try to renew at least one month early. Th helps us keep our book keeping in order and avoids your missir any issues of the newsletter.

There are two easy ways to renew:

1. Fill out a membership renewal form in the front lobby befo our monthly meeting and present it with $25 (in cash or check) t the Treasurer. Add $6 for first class mailing of the newsletter.

2. Copy the information on your mailing label and send, wi your remittance, to:

Robert P. Mulhearn
8 Crescent Road
Pinebrook,NJ 07058

>>>CHECK YOUR LABEL<<<
>>>TODAY!<<<

J A C G Newsletter Advertisements

RETAILERS - MANUFACTURERS - VENDORS

How would you like to reach a targeted audience of over 700 ATARI computer users? This newsletter has a press run of 80 per month, is read by members and non-members alike, and i sent to over 60 other ATARI User Groups across the U.S. and i several other countries.

Advertising is available on a first-come and space-available basis. Camera ready copy, accompanied by payment, must reac the Editor by the 20th day of the month preceding publication. JACG reserves the right to make decisions concerning th placement of ads within the Newsletter and editing or rejectin advertisements deemed unsuitable.



Advertising Rates

Full page (7-1/2 x 9) ... $48.00
Half page $25.00
Quarter page $18.00

Discount rates available upon request.

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########################################
#        J    A    C    G              #
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##########################
##     BULK RATE        ##
##   U.S. POSTAGE       ##
##       PAID           ##
##  PINE BROOK, NJ      ##
##    PERMIT #56        ##
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JACG NEWSLETTER - VOLUME 7, NUMBER 7

SEPTEMBER 1987

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